MARICOPA COUNTY MAJOR STREETS AND ROUTES PLAN

STREET CLASSIFICATION ATLAS



Adopted April 18, 2001

MARICOPA COUNTY MAJOR STREETS AND ROUTES PLAN STREET CLASSIFICATION ATLAS

Prepared for

Maricopa County Department of Transportation

By

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Adopted April 18, 2001

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BACKGROUND

On December 17, 1997, the Transportation System Plan (TSP) for Maricopa County was adopted. The TSP calls for the preparation of a Maricopa County Major Streets and Routes Plan (MSRP) to designate and map street widths for all primary and secondary roads in the Maricopa County roadway system.

The MSRP includes two components:

- This Street Classification Atlas that designates the future functional classification for 539 miles of the Primary Roadway System and the 1,281 miles in the Secondary Roadway System that are in the County Road Inventory System
- A Policy Document to support the Street Classification Atlas

GEOMETRIC DESIGN STANDARDS

The functional classification system used by Maricopa County to classify County streets includes six classifications: expressway, principal arterial, minor arterial, major collector, minor collector, and local street. The cross-section for each classification is shown graphically in the six figures, starting on page 5.

GEOMETRIC DESIGN CONSIDERATIONS

Urban or Rural Designation

Each figure includes cross-sections for rural and urban conditions, the difference being the urban sections include curb-and-gutter. Dimensions on urban sections are measured to the face of curb.

Typically, Maricopa County will build a rural section (without curb-and-gutter) unless one of the two following situations are present:

- The subject section is a continuation of a roadway with curb-and-gutter.
- A municipality is planning to annex the roadway and pays for the upgrading of the roadway to an urban section.

A determination of the appropriate section (urban or rural) for each roadway will be made as part of the Candidate Assessment Report or Design Concept Report phase of project

development. Depending upon existing conditions, an interim urban roadway, without curb-and-gutter, may be constructed.

Based upon growth projections for Maricopa County, adopted by the Maricopa Association of Governments (MAG), it is anticipated that, with some exceptions, all principal and minor arterial streets within the area east of Perryville Road and north of Hunt Highway will be urban and, thus, have curb-and-gutter by the year 2020. A density of one or more dwelling units per acre was used to define this area. The exceptions are:

- Streets within the Gila River Indian Community
- Streets within the Salt River Pima-Maricopa Native American Community
- Streets within the Tonto National Forest
- MC 85
- Loop 303

Right-of-Way Width

The right-of-way width ranges from 91.4 meters (300 feet) for the expressway classification to 15.2 meters (50 feet) for local streets. Principal and minor arterials require 39.6 meters (130 feet), major collectors require 24.4 meters (80 feet), and minor collectors require 18.2 meters (60 feet). In order to maintain a 9.1 meters (30 feet) clear zone on rural principal arterials without curb-and gutter, 45.7 meters (150 feet) of right-of-way will be required.

Additional right-of-way may be required at some locations:

- Intersections: the Maricopa County Department of Transportation (MCDOT) Roadway Design Manual should be consulted for additional right-of-way requirements at intersections to accommodate turn lanes and bus pullouts.
- Overlays: maps identifying scenic/recreational, public transportation, AZTech, oversize load, school safety, and Roads of Regional Significance routes should be consulted to determine if additional right-of-way is required. The overlay maps are included in the Appendix to this Atlas.
- Mountainous terrain: additional right-of-way may be required to satisfy design considerations in mountainous terrain.

Number of Lanes

The basic width for expressways and principal arterials is six lanes plus a median, although expressways may have more lanes. Minor arterials have five lanes and major collectors

have three lanes, both including a two-way-left-turn-lane. Minor collectors and locals each have two lanes.

Based upon a traffic study, the number of lanes constructed as part of the initial project may be less. The primary criteria to be used in determining the appropriate number of lanes is that the roadway should handle the twenty-year forecast traffic at Level of Service C or better.

Bicycle Lanes

Bicycle lanes are included in the standard cross-sections for all principal arterial, minor arterial, and major collector streets. Bicycles are also accommodated on minor collector and local streets with wide outside lanes, possibly sharing a parking lane. Bicycles are not allowed on expressways throughout the urban area.

Bus Pullouts

Right-of-way for bus pullouts and shelters should be preserved at all intersections of all principal arterial/principal arterial, principal arterial/minor arterial, and minor arterial/minor arterial intersections.

STREET CLASSIFICATION

The Maricopa County Street Classification system is presented on a series of nineteen maps covering the entire County. The map page index is presented on page 10, followed by the nineteen classification maps. As the County develops, all section line roads, even those not identified in the Atlas, should be constructed as arterial streets.

The County classification system should be reviewed and modified every four years, or if necessary, as cities and towns update their classification systems.

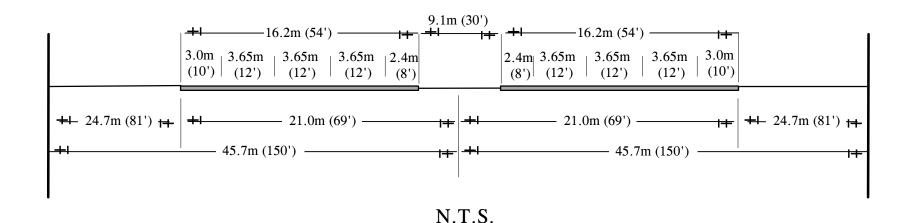
County Island Roadways

County islands pose a unique problem in that they create short segments of County-owned roadways that do not connect to other County roadways. Rather, they connect roadways owned and operated by local municipalities. The following County island roadway policy is adopted as part of the Major Streets and Routes Plan.

County Island Roadway Policy

All County island roadways will be classified and right-of-way will be purchased to match the classification assigned by the surrounding municipality. In the case of a County island

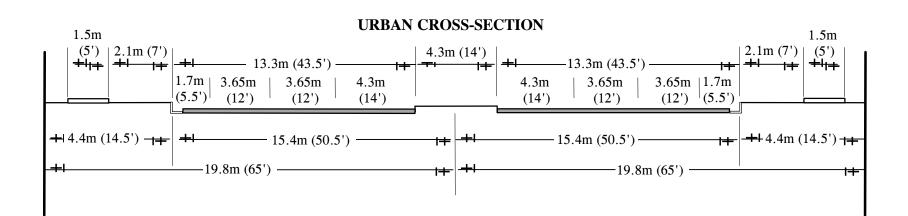




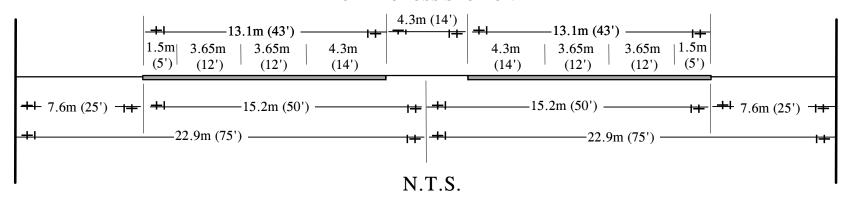
Notes: * Dimensions measured from face-of-curb or edge of pavement * Interim roadway width to be determined by traffic study

Maricopa County Department of Transportation Geometric Design Standards

EXPRESSWAY



RURAL CROSS-SECTION



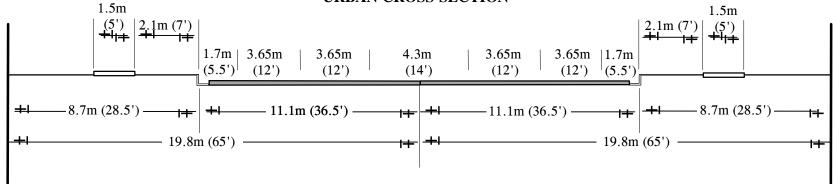
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* Interim roadway width to be determined by traffic study

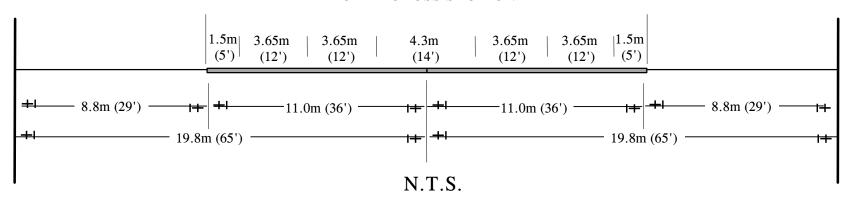
Maricopa County Department of Transportation Geometric Design Standards

PRINCIPAL ARTERIAL

URBAN CROSS-SECTION



RURAL CROSS-SECTION



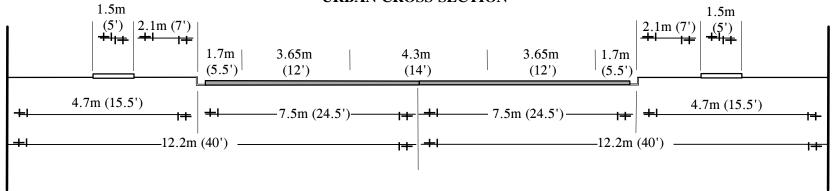
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Maricopa County Department of Transportation Geometric Design Standards

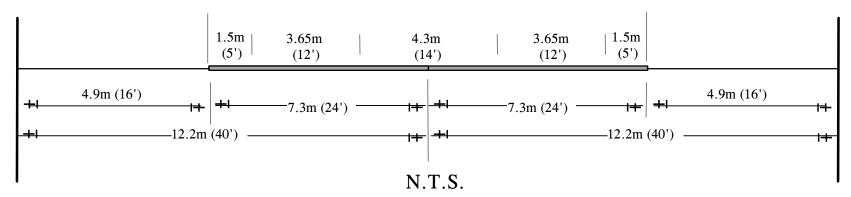
MINOR ARTERIAL

^{*} Interim roadway width to be determined by traffic study

URBAN CROSS-SECTION



RURAL CROSS-SECTION



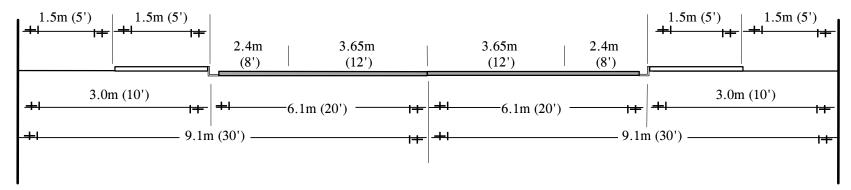
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Maricopa County Department of Transportation Geometric Design Standards

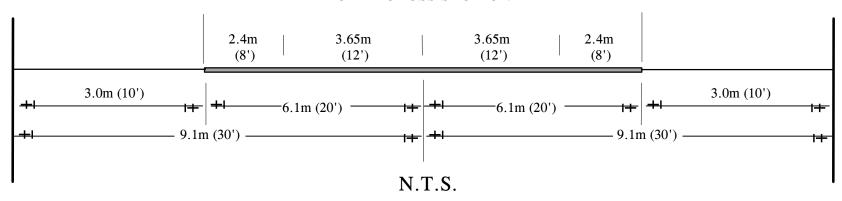
MAJOR COLLECTOR

^{*} Interim roadway width to be determined by traffic study

URBAN CROSS-SECTION



RURAL CROSS-SECTION

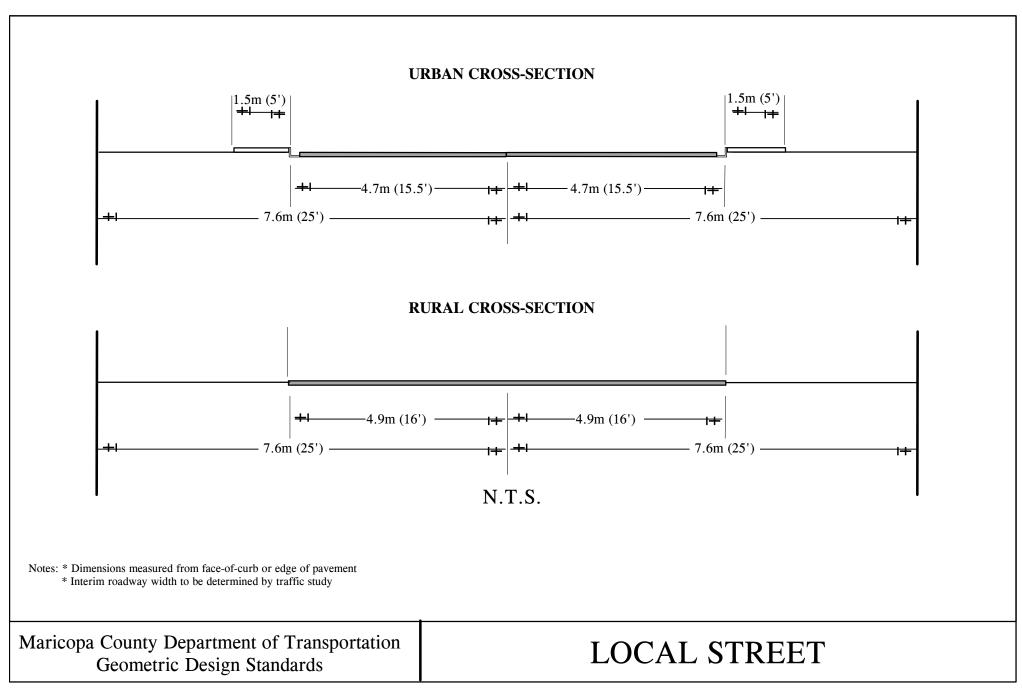


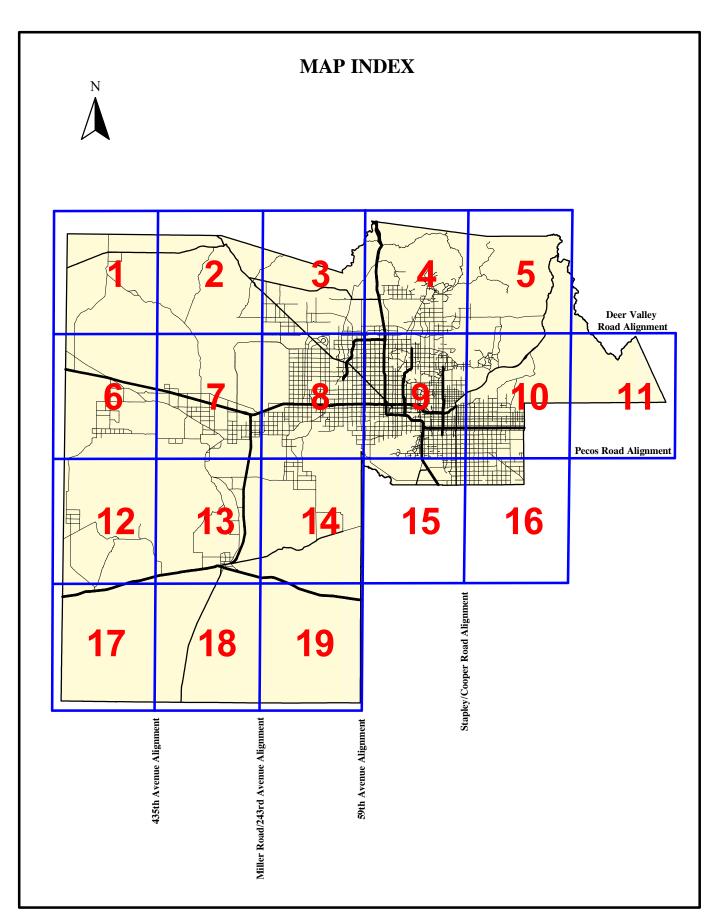
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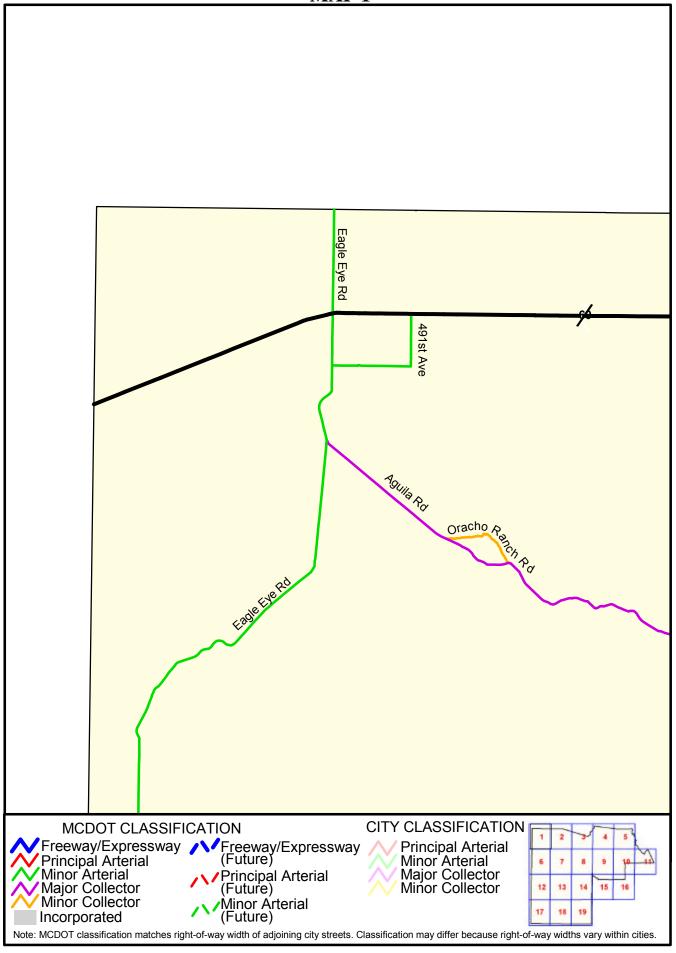
* Interim roadway width to be determined by traffic study

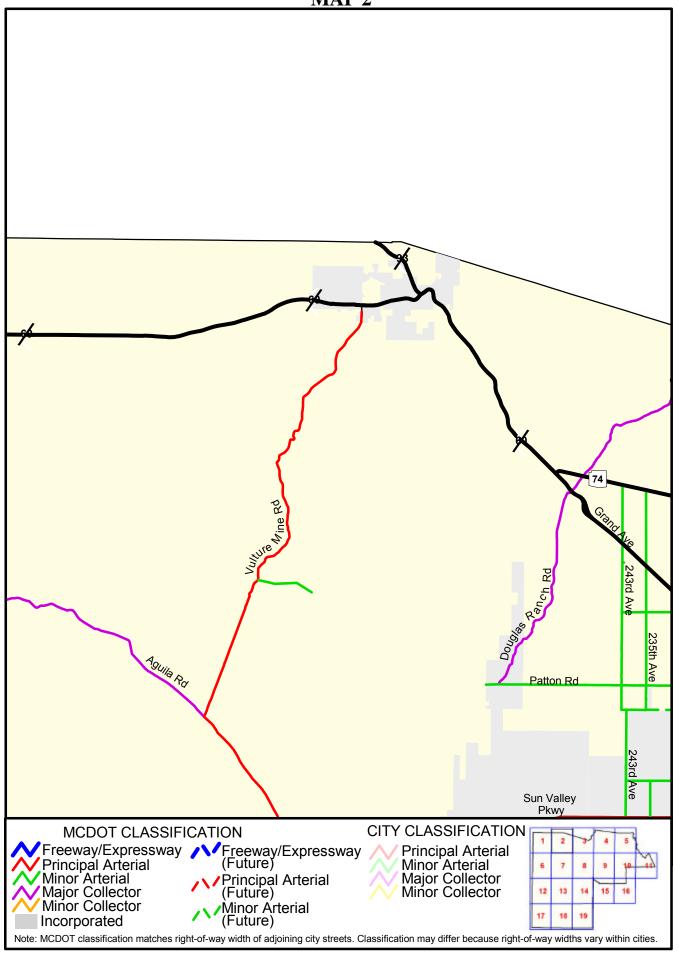
Maricopa County Department of Transportation Geometric Design Standards

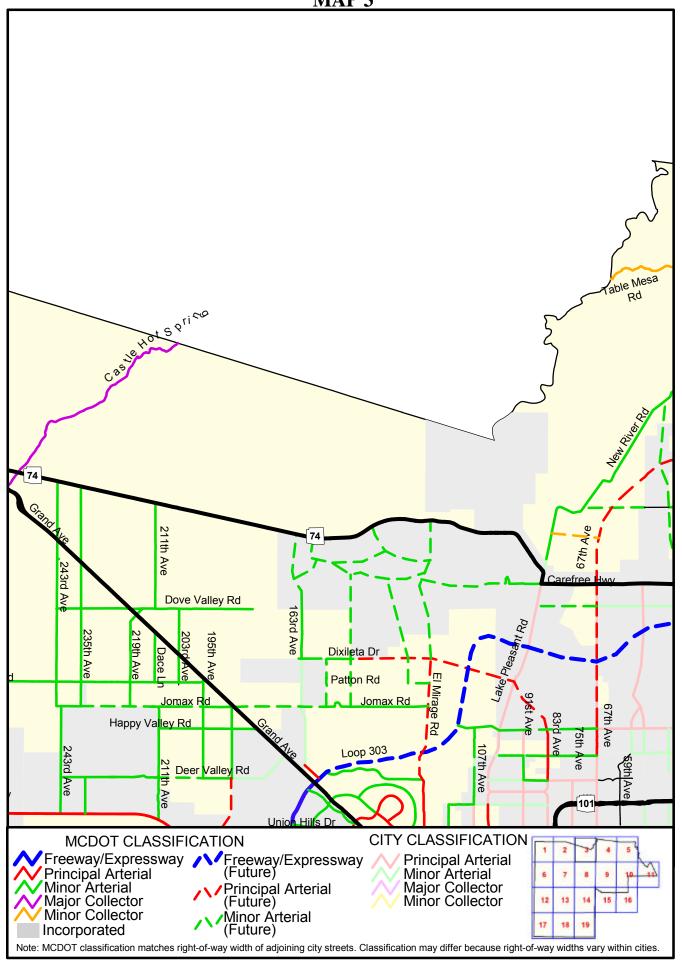
MINOR COLLECTOR

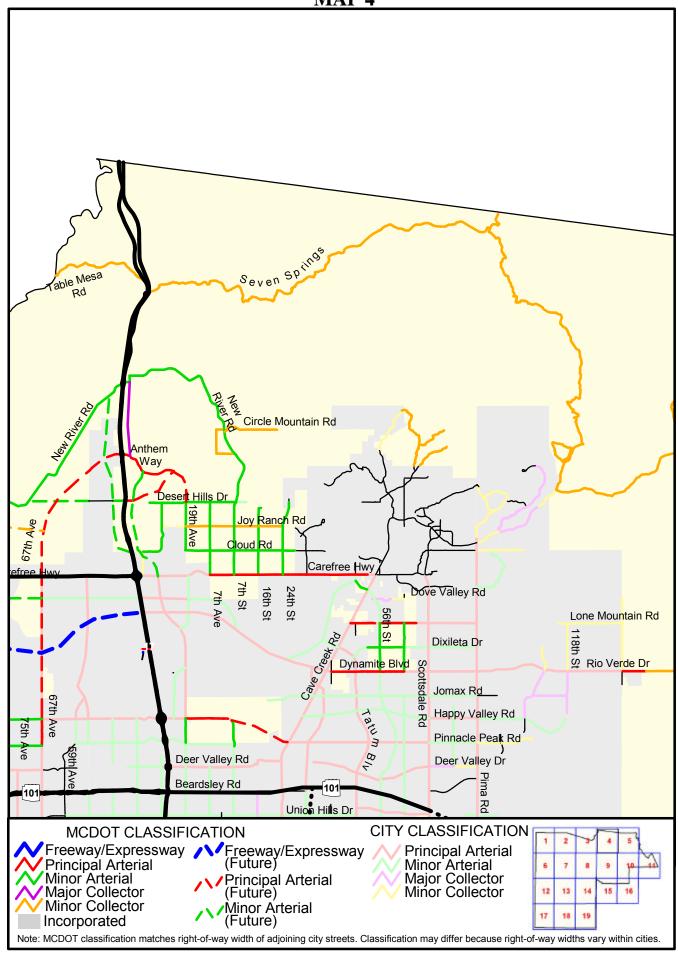


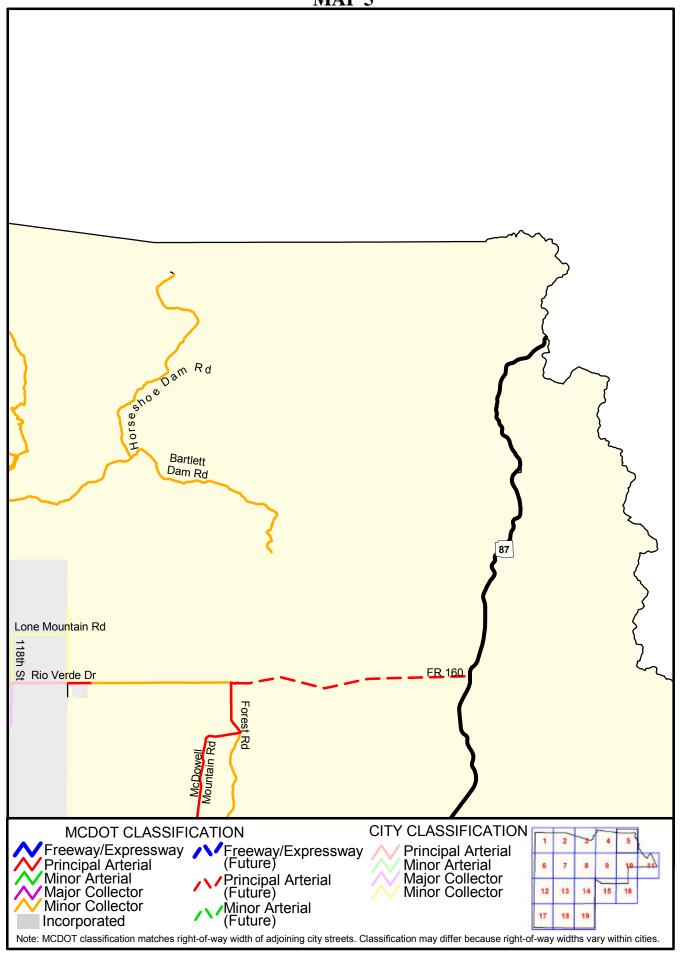


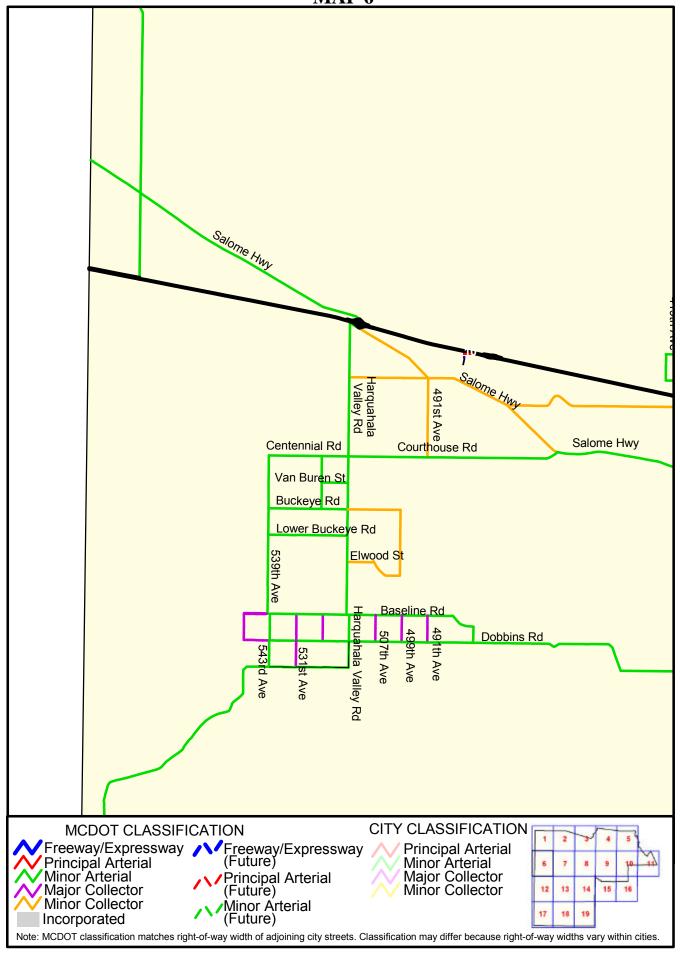










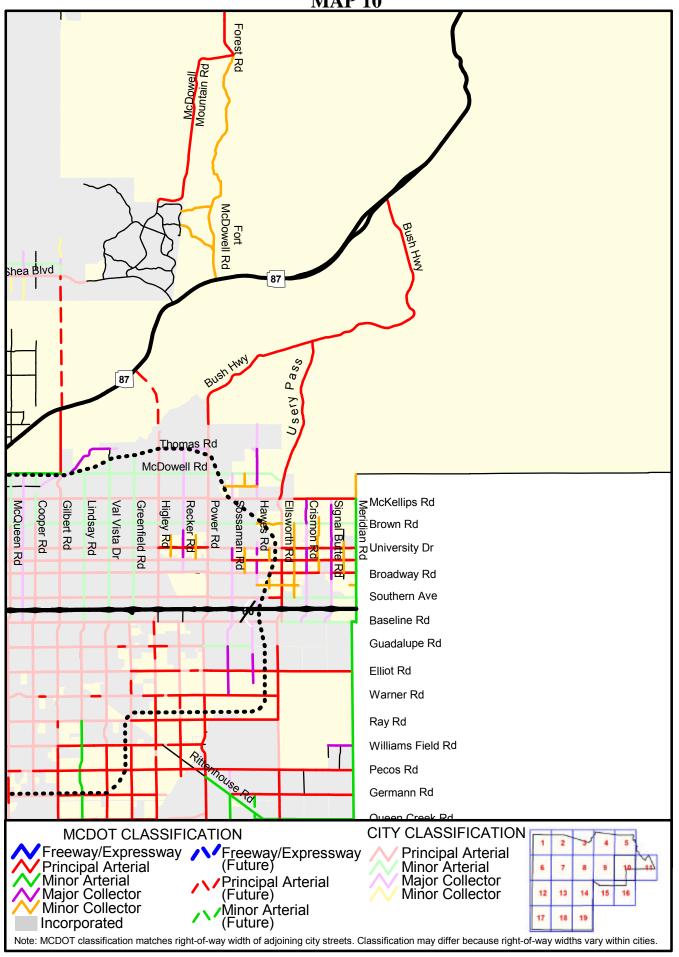


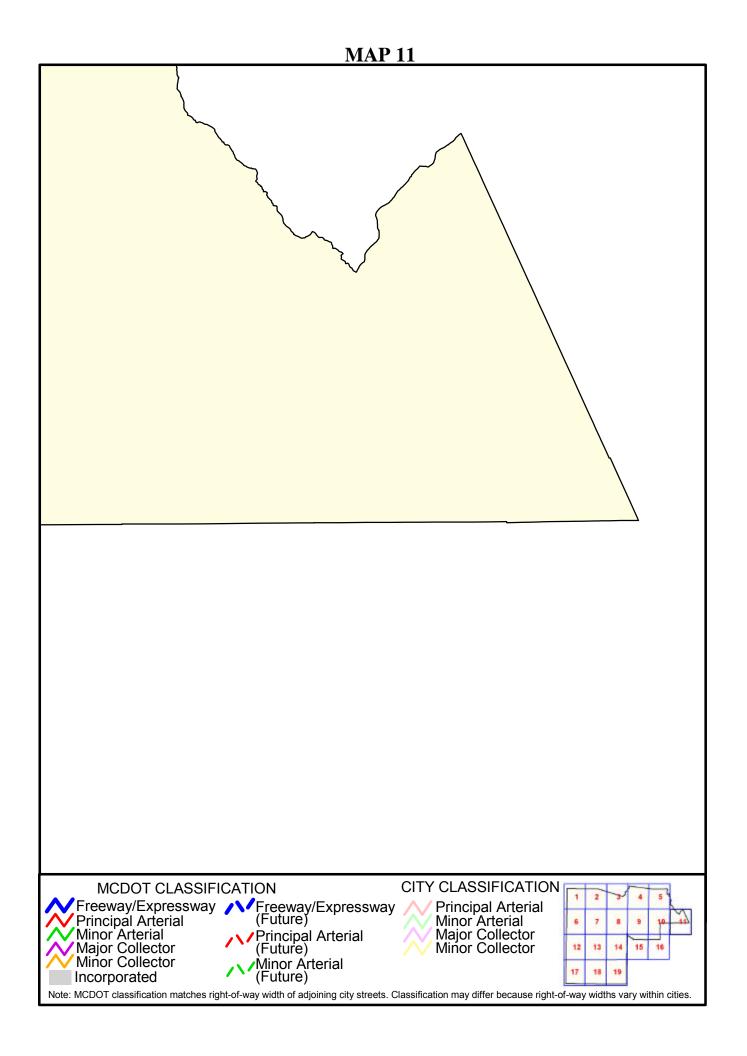
MAP 7 243rd Ave Sun Valley Pkwy Wickenburg R 419th Ave 411th Ave Wickenburg Rd Sun Valley Pkwy Camelback Rd Indian School Rd Tonopah Salome Hwy 39th Ave 411th Ave 95th Ave Salome Hwy 3rd Ave 1st Ave Van Bure<mark>n St</mark> Buckeye Rd Lower Buckeye Rd Broadwa<mark>y</mark> Rd Wintersburg Rd Salome Hwy Southern Ave 351th Ave Turner Rd Baseline Rd 411th Ave 399th Ave on Ave Palo Verde Ro Dobbins Ro Apache Rd Johnsor glesby Rd Miller Rd Elliot Rd Rooks Rd Narramore Rd Arlington School Rd Old US 80 CITY CLASSIFICATION MCDOT CLASSIFICATION Freeway/Expressway
Principal Arterial
(Future) Principal Arterial Minor Arterial Major Collector Minor Collector Principal Arterial Minor Arterial
Major Collector
Minor Collector Principal Arterial (Future) 12 13 Minor Arterial (Future) Incorporated Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

MAP 8 Jomax Rd 67th Ave 83rd Av Happy Valley Rd 75th Loop 303 107th Ave 211th Ave Deer Valley Rd 101 Unio Sarival Ave **Bullard Ave** Bell Rd Reems Rd Bell Rd Cotton Ln nfield Rd Greenway Rd Waddell Rd Cactus Rd Peoria Ave Olive Ave 101 Northern Ave Glendale Ave Bethany Home Ro Camelback Rd Litchfield Reems Indian School Rd Bullard Ave Dysart Ω trus ival Ave ≓ Thomas Rd 忍 忍 忍 McDowell Rd Van Buren St Yum<mark>a Rd</mark> Lower Buckeye Rd 115th Jac Broadway Rd 107th rabbit Ti Ш 99th Southern Ave Mirage Indian Ave Ave Springs Rd 91st Ave Watson Rd Rainbow Rd Apache Ro Dobbins Rd Viiller Rd ean Rd 83rd Ave Ellio Rd Elliot Rd Rooks Rd Estrella Pkwy IJ Ray Rd 51st Ave Germann Rd Queen Creek R CITY CLASSIFICATION MCDOT CLASSIFICATION Freeway/Expressway
Principal Arterial
(Future) **Principal Arterial** Minor Arterial Major Collector Minor Collector Minor Arterial Major Collector Principal Arterial (Future) 12 13 Minor Collector Minor Arterial Incorporated (Future) Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

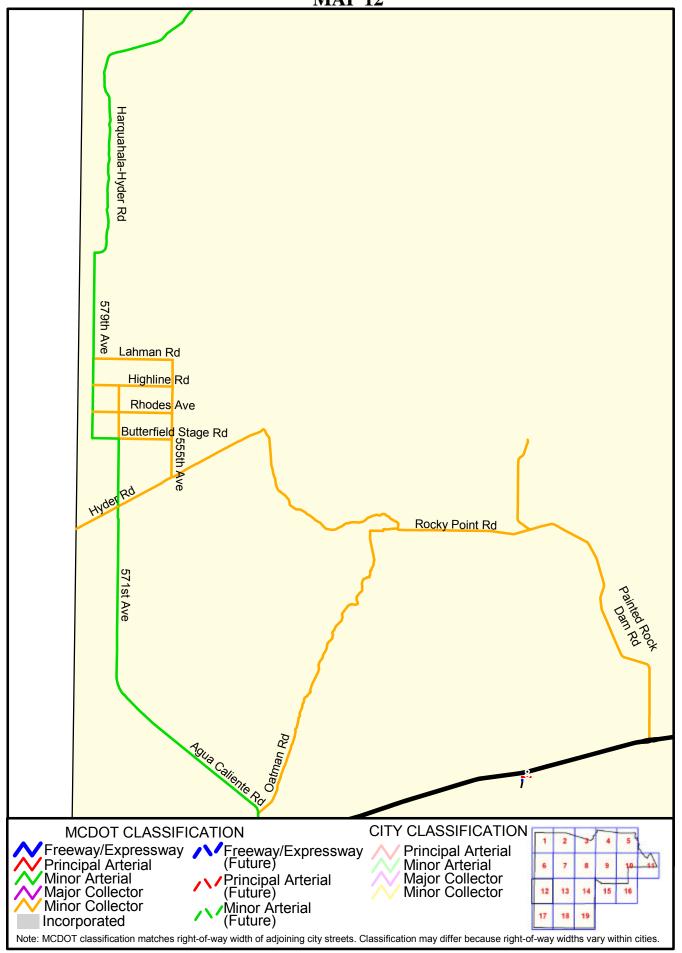
MAP 9 Jomax Rd 67th Ave Tatum Happy Valley Rd 忍 Pinnacle Peak Rd Deer Valley Rd Deer Valley Dr Pima Beardsley Rd 101 101 忍 Union Hills Dr 56th St 64th St Bell Rd Bell Rd Scottsdale Rd Greenway Rd Thunderbird Rd Hayden Rd 32nd St 96th St Cactus Rd S Shea Blvd Peoria Ave Olive Ave Dunlap Northern Ave Glendale Ave Bethany Home Ro McDon**a**ld D Camelback Rd Indian School Rd Thomas Rd McDowell Rd Gilbert Rd McQueen Rd Cooper Rd Lindsay Rd 143 University Dr Central Ave 7th Ave 101Broadway Ro Southern Av 19th Ave 32nd St 40th S Baseline Rd 16th St 24th St 7th St Guadalupe Fd Dobbins Rd Elliot Rd Ellio Rd Warner Rd 43rd Av Rural Rd 35th Ave McClintock Ray Rd Williams Field Rd Pecos Rd Germann Ro MCDOT CLASSIFICATION CITY CLASSIFICATION ✓ Freeway/Expressway
✓ Principal Arterial
✓ Principal Arterial Principal Arterial Minor Arterial Major Collector Minor Collector Minor Arterial Major Collector Principal Arterial (Future) 12 13 Minor Collector Minor Arterial (Future) Incorporated Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.

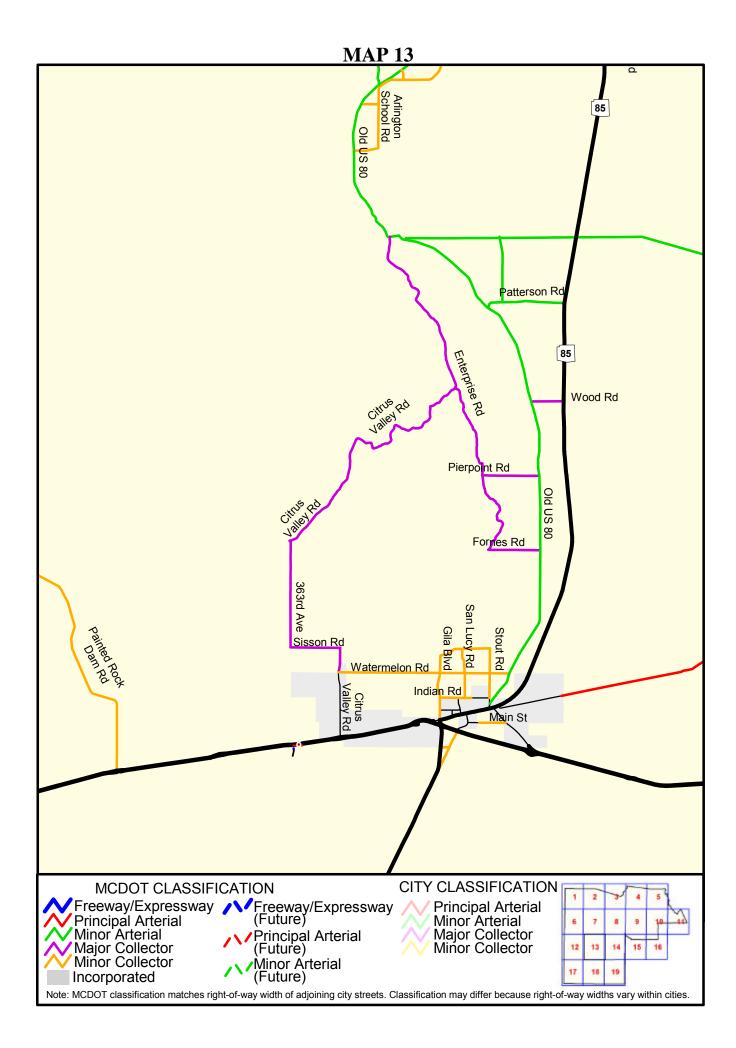
MAP 10



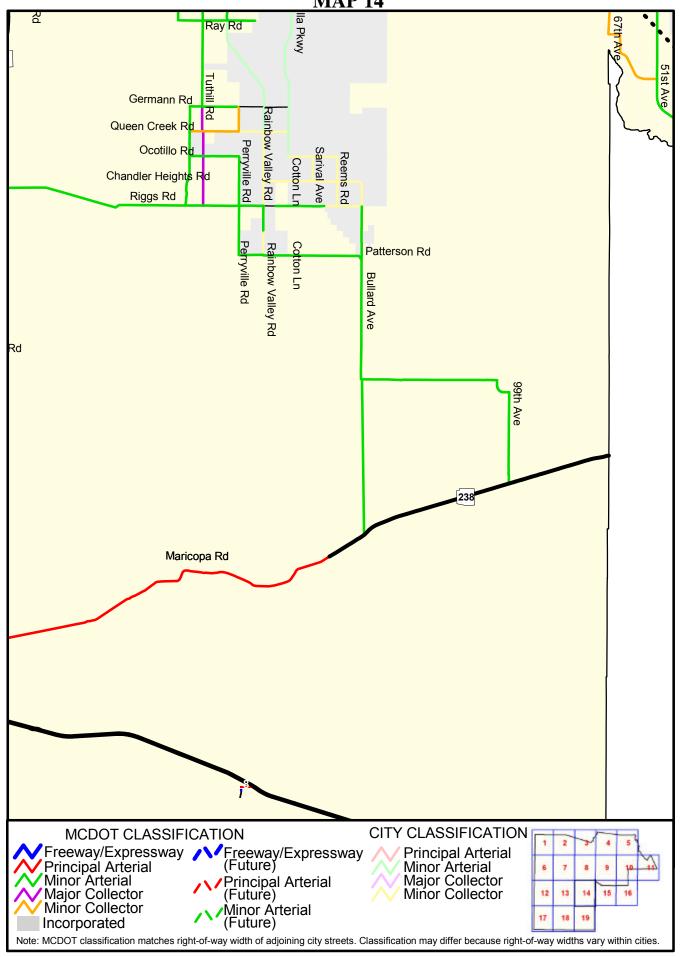


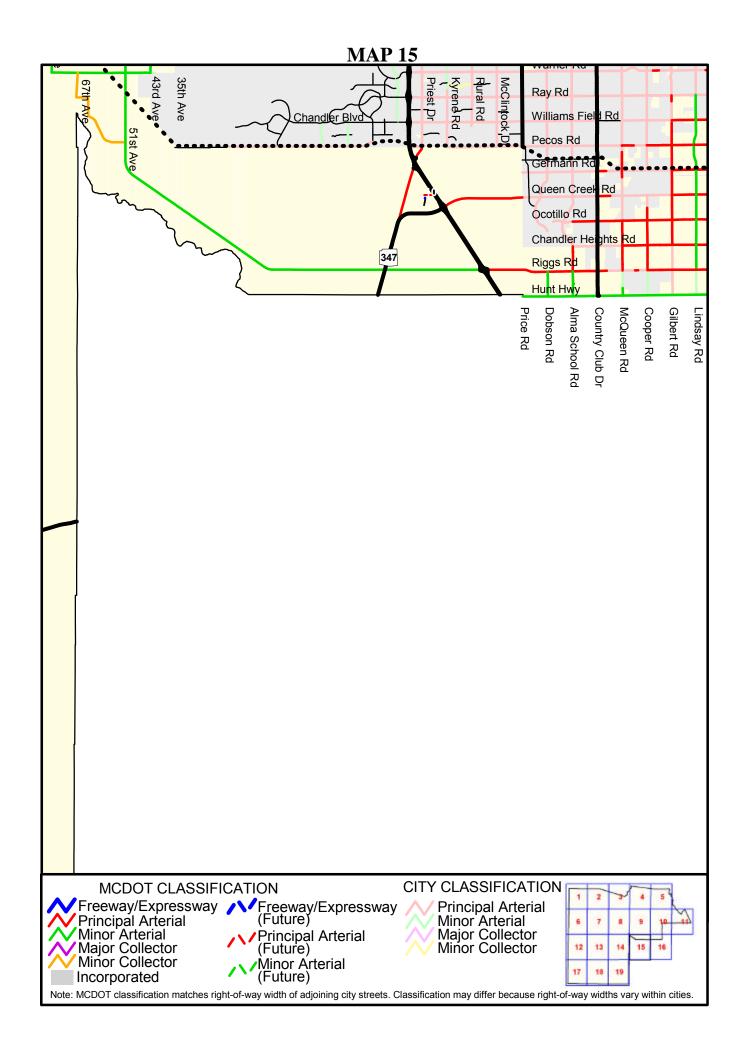
MAP 12

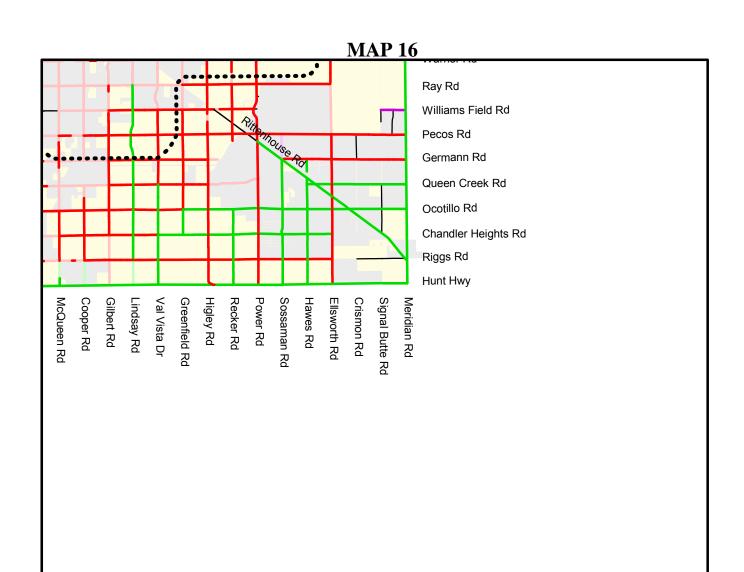




MAP 14

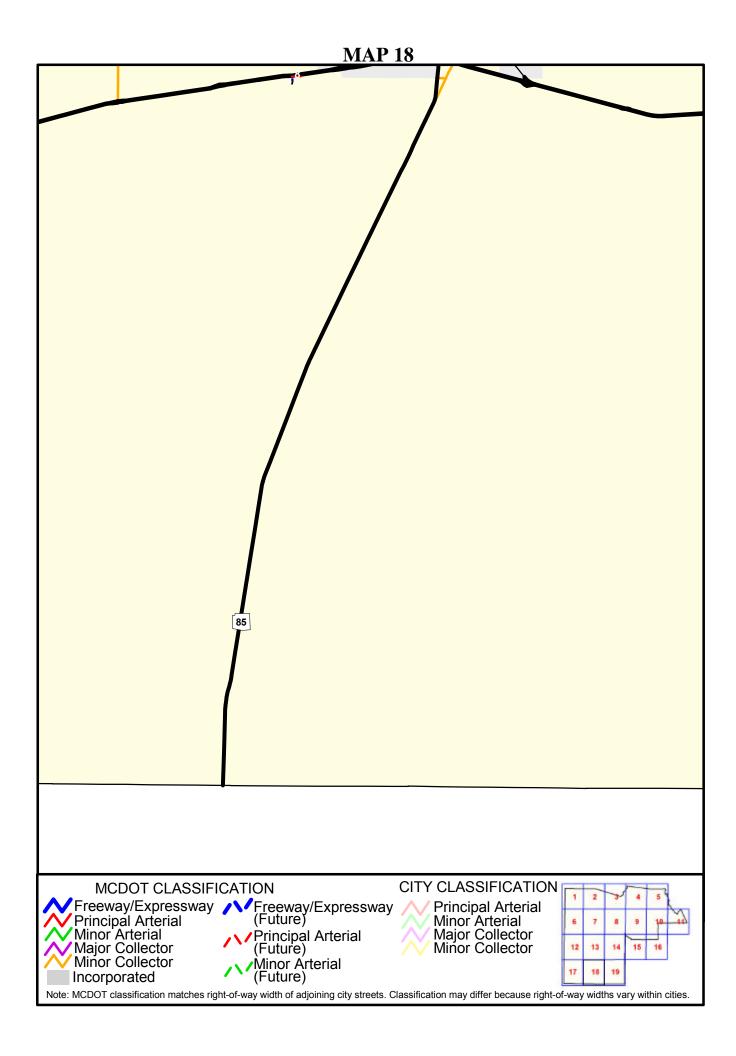


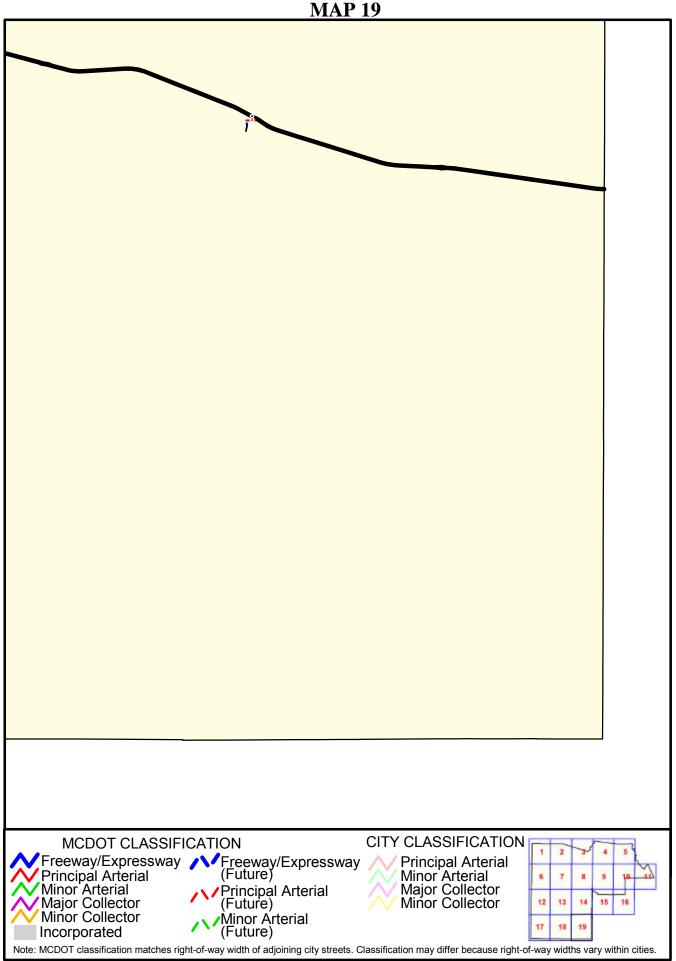


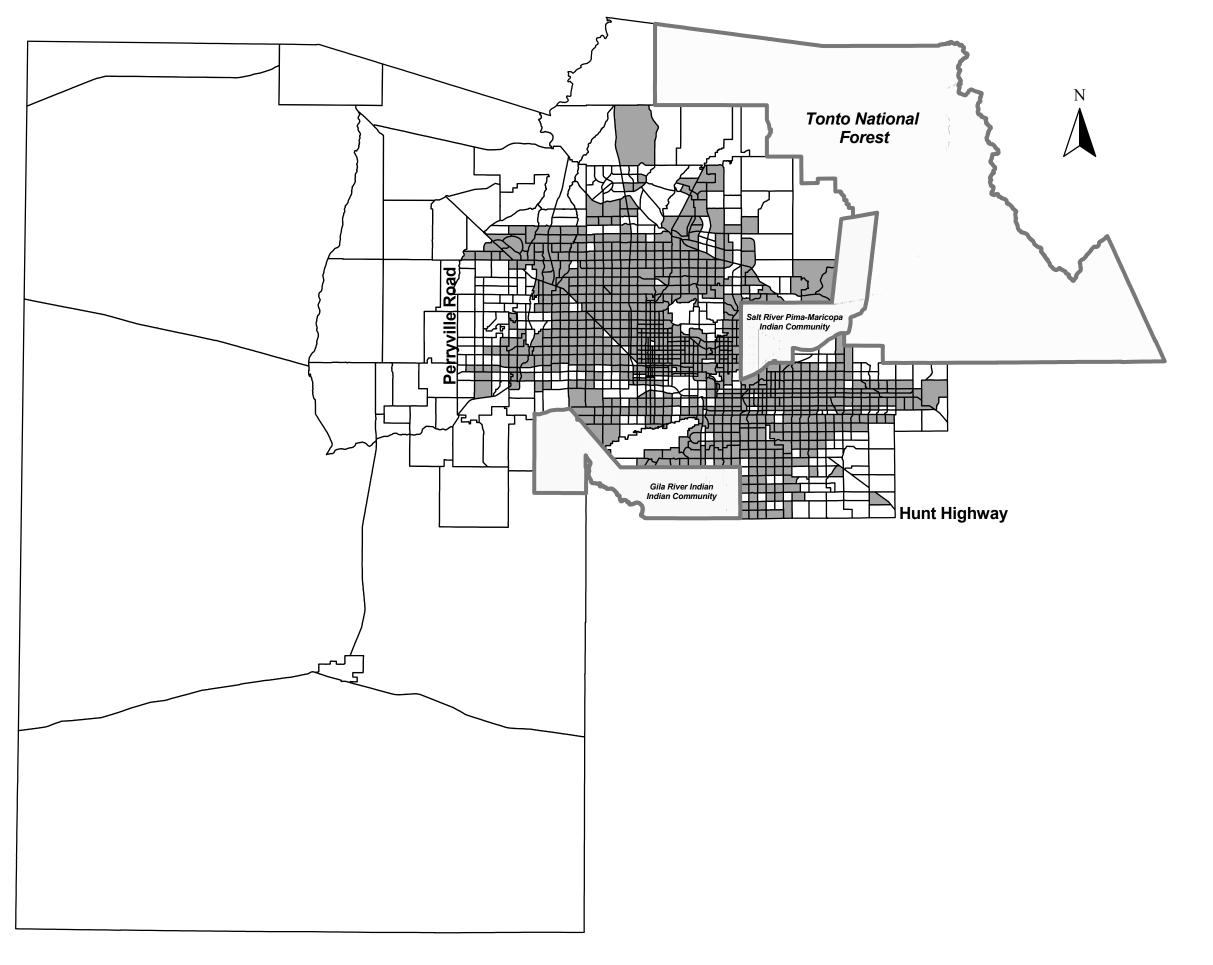




Note: MCDOT classification matches right-of-way width of adjoining city streets. Classification may differ because right-of-way widths vary within cities.







ESTIMATED DWELLING UNIT DENSITY IN 2020

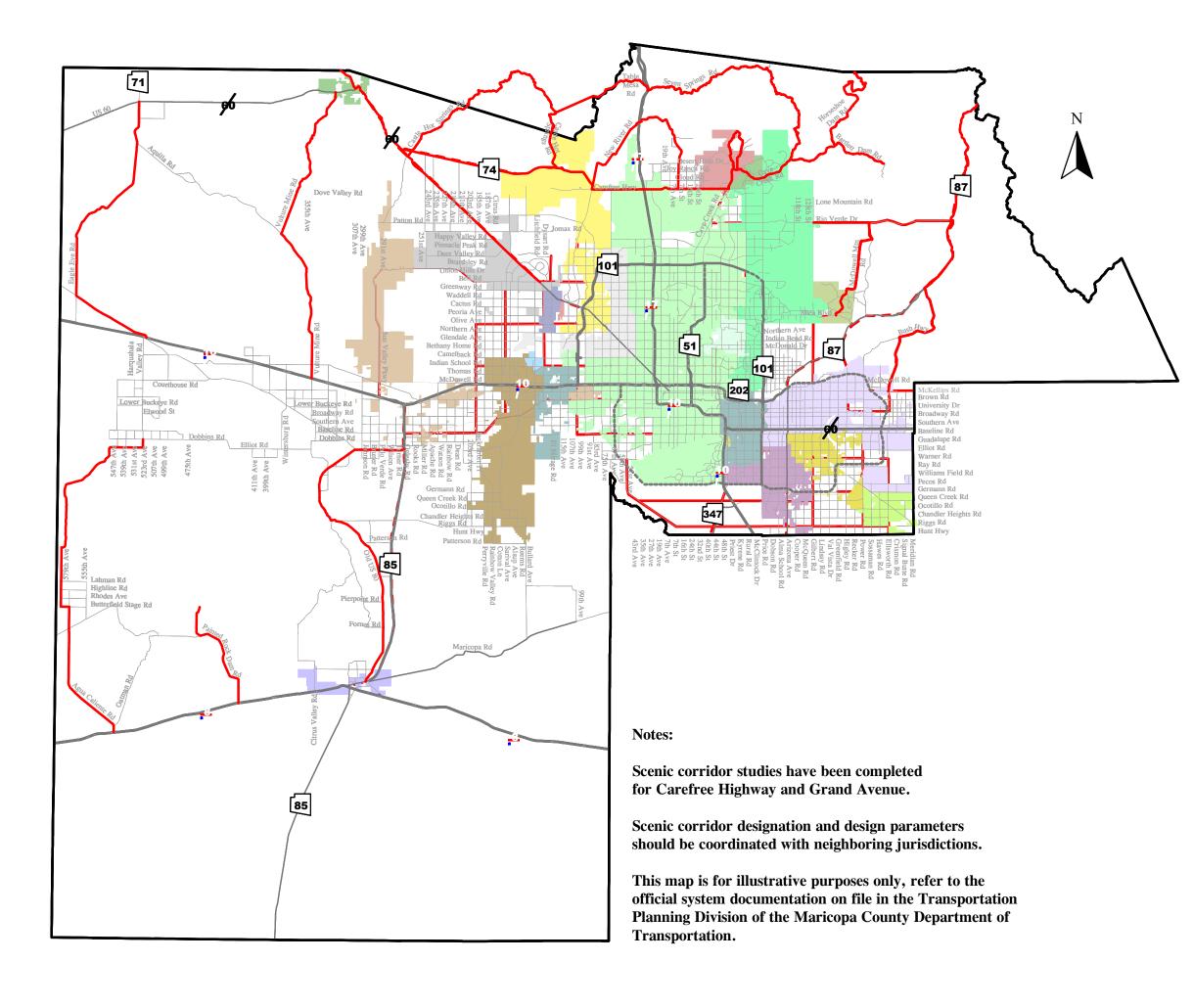




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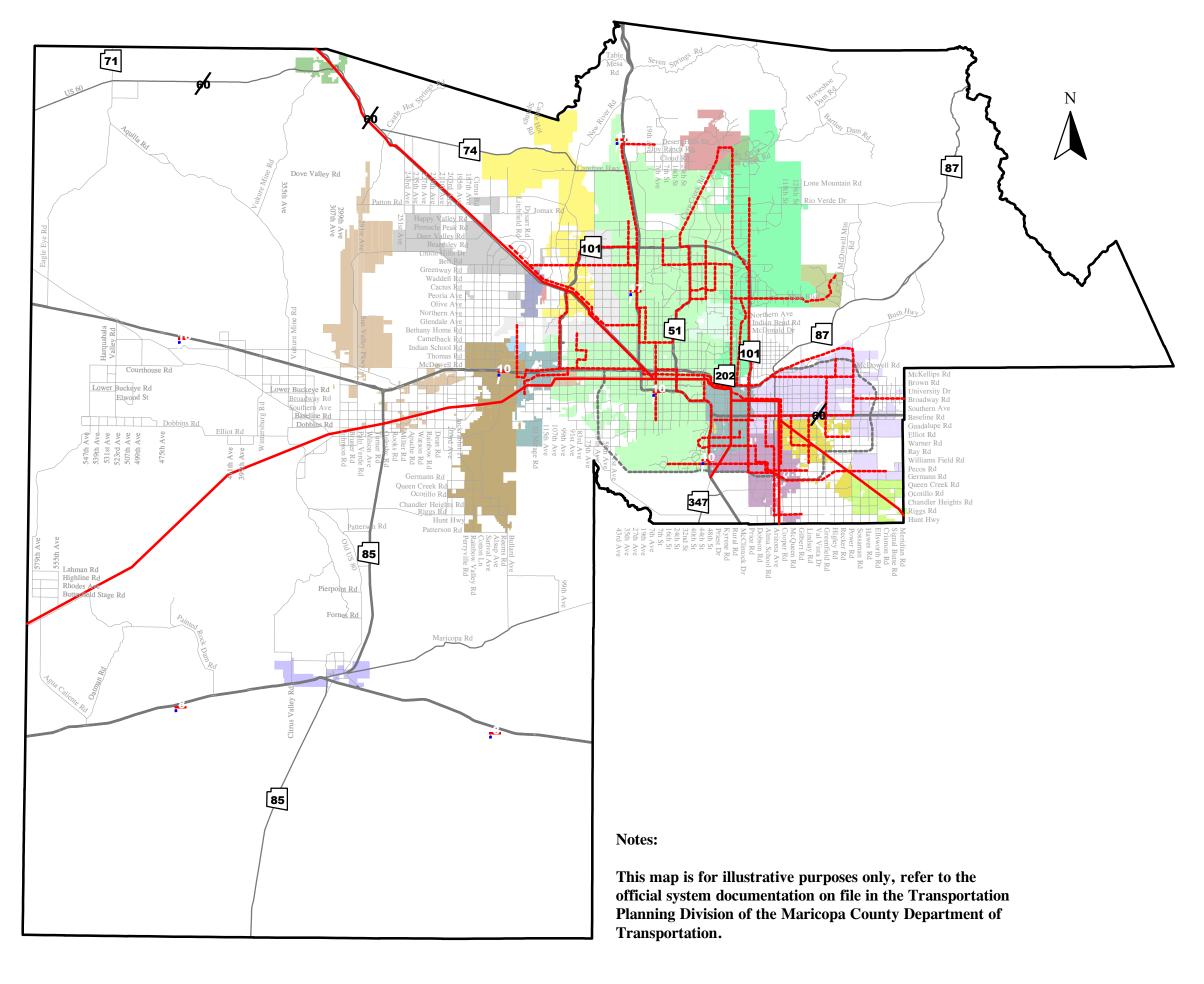


SCENIC/RECREATIONAL OVERLAY

To protect the scenic environment and to provide access to recreational facilities

Overlay Route
County Boundary

- * A scenic easement of 15.1 meters (50 feet)shall be added on each side of the right-of-way to provide for a wider corridor of natural habitat preservation.
- * Special signage identifying the roadway as a scenic corridor shall be included.

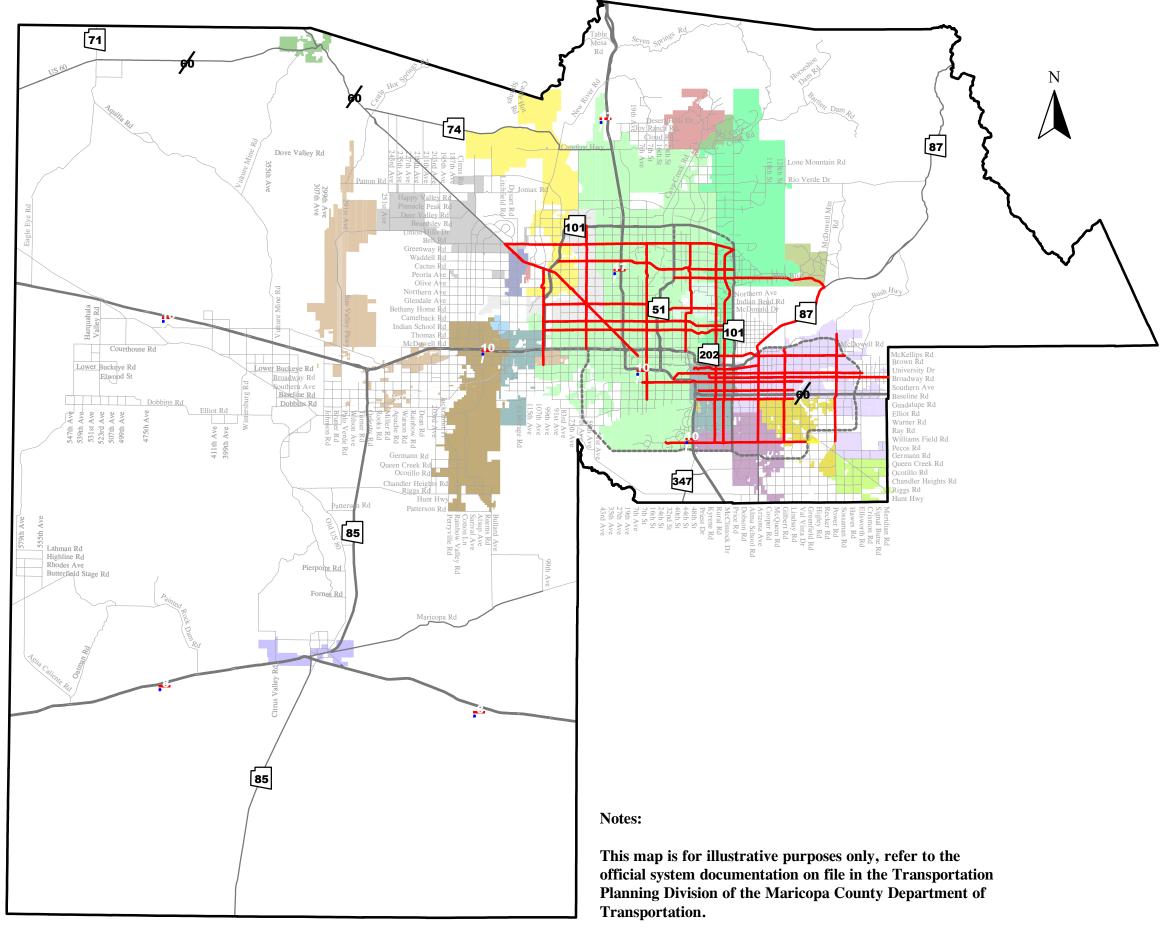


PUBLIC TRANSPORTATION OVERLAY

To identify potential regional rail or bus transit corridors

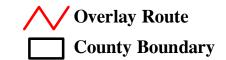
- / Existing Railroad Lines Potential Commuter Rail Corridors
- Potential Rapid Transit
 Corridors Identified in MAG
 Fixed Guideway Plan
- **County Boundary**

- * The right-of-way shall be increased by 9.1 meters (30 feet) to provide for rail or rapid bus transportation.
- * The right-of-way shall be increased by an additional 6.1 meters (20 feet) for 90.9 meters (300 feet) on approach to major intersections.
- * RPTA should be contacted prior to reserving any additional right-of-way.



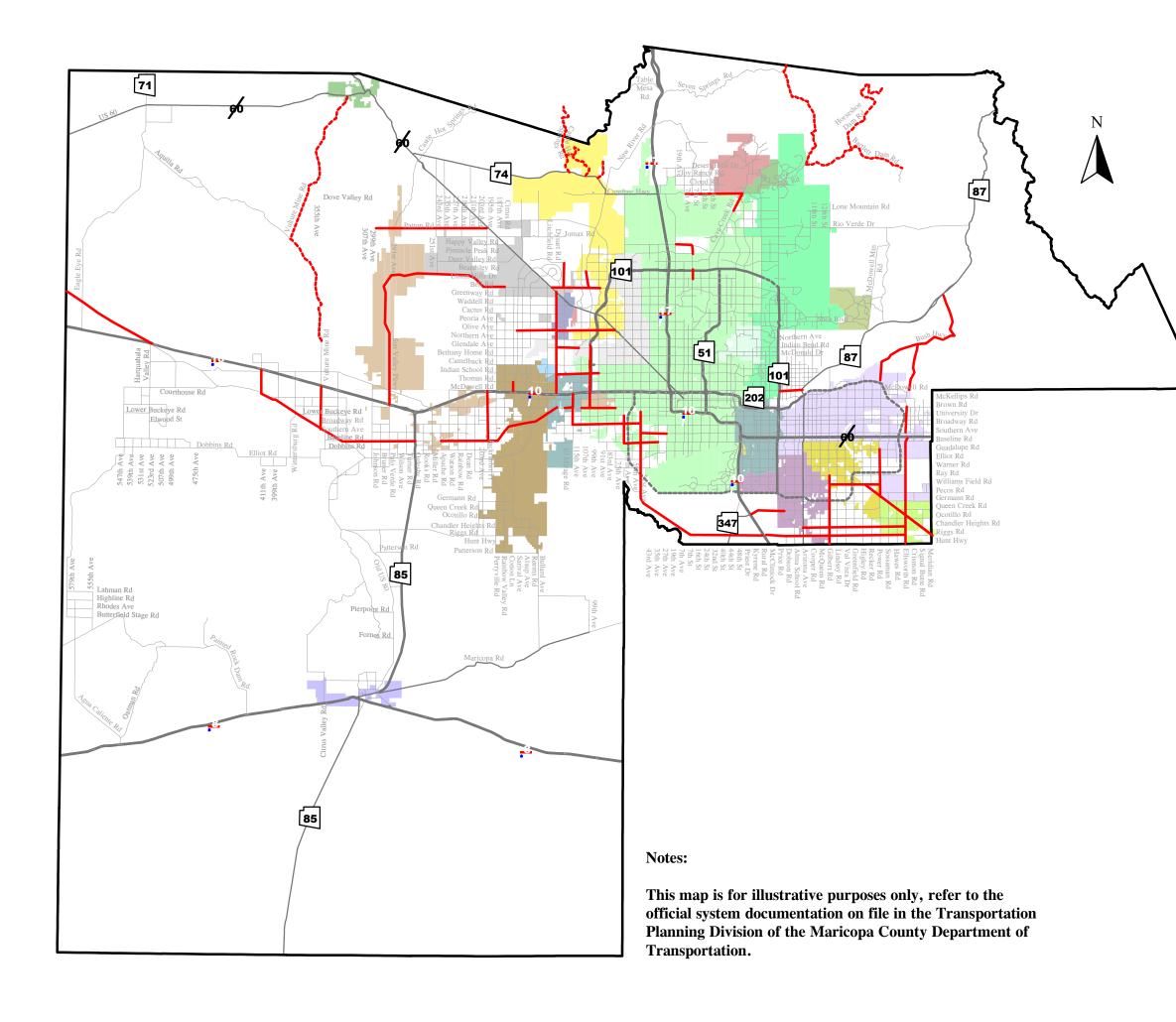
AZTECH OVERLAY

To identify corridors where technology will be incorporated to improve transportation service



DESIGN PARAMETERS

* AZTech should be consulted regarding ITS needs during the design concept phase of a project.

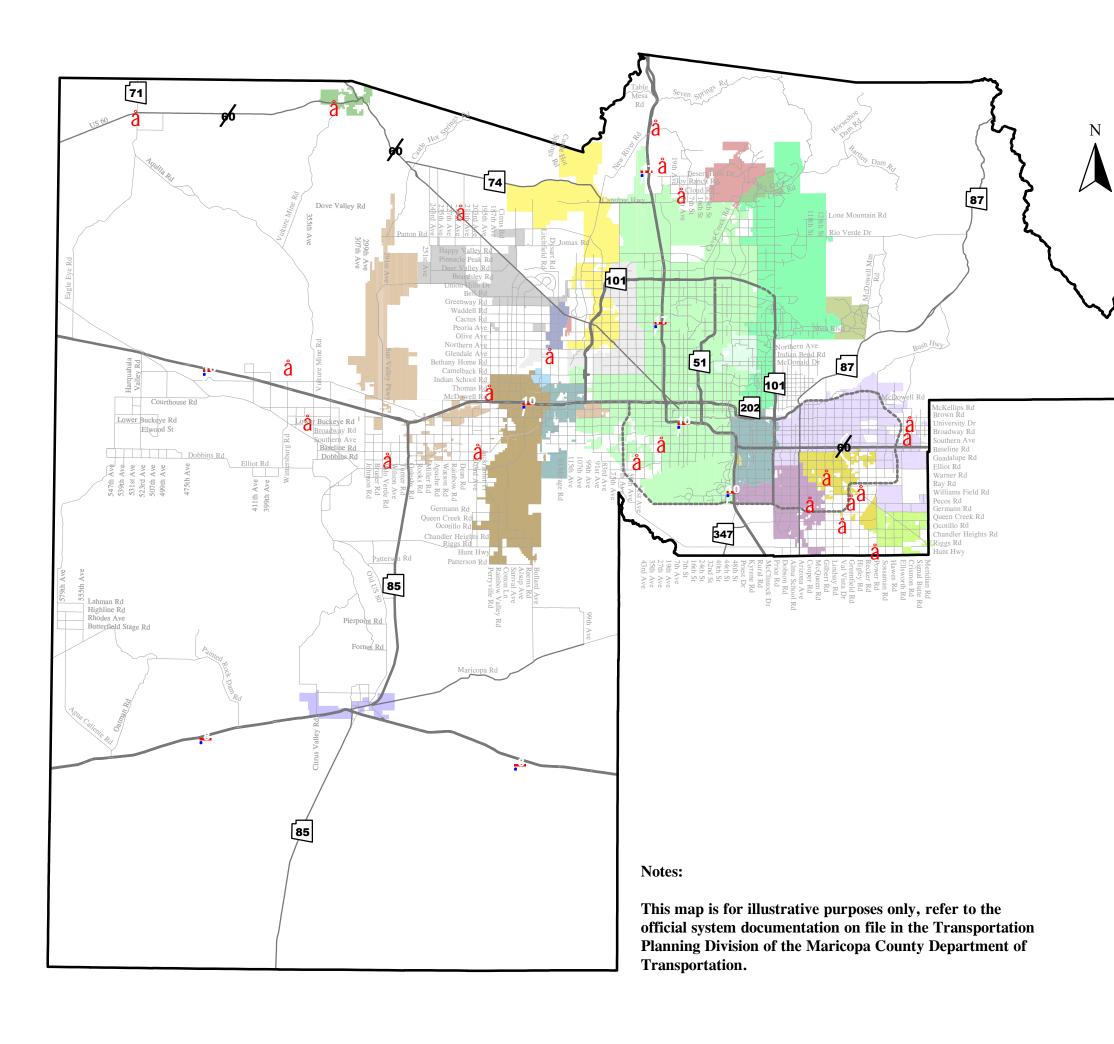


OVERSIZE LOAD OVERLAY

To identity routes designed for use by oversize vehicles or routes on which usage is restricted

/.	Preferred Routes
\sim	Restricted Routes
	(Usage Discouraged)
	County Boundary

- * Overhead equipment shall have a minimum clearance of 17 feet.
- * Overhead equipment shall be supported from one side of the roadway only to allow for overheight vehicles to move around obstructions.
- * Raised medians shall be located so as not to obstruct the movement of oversize loads.



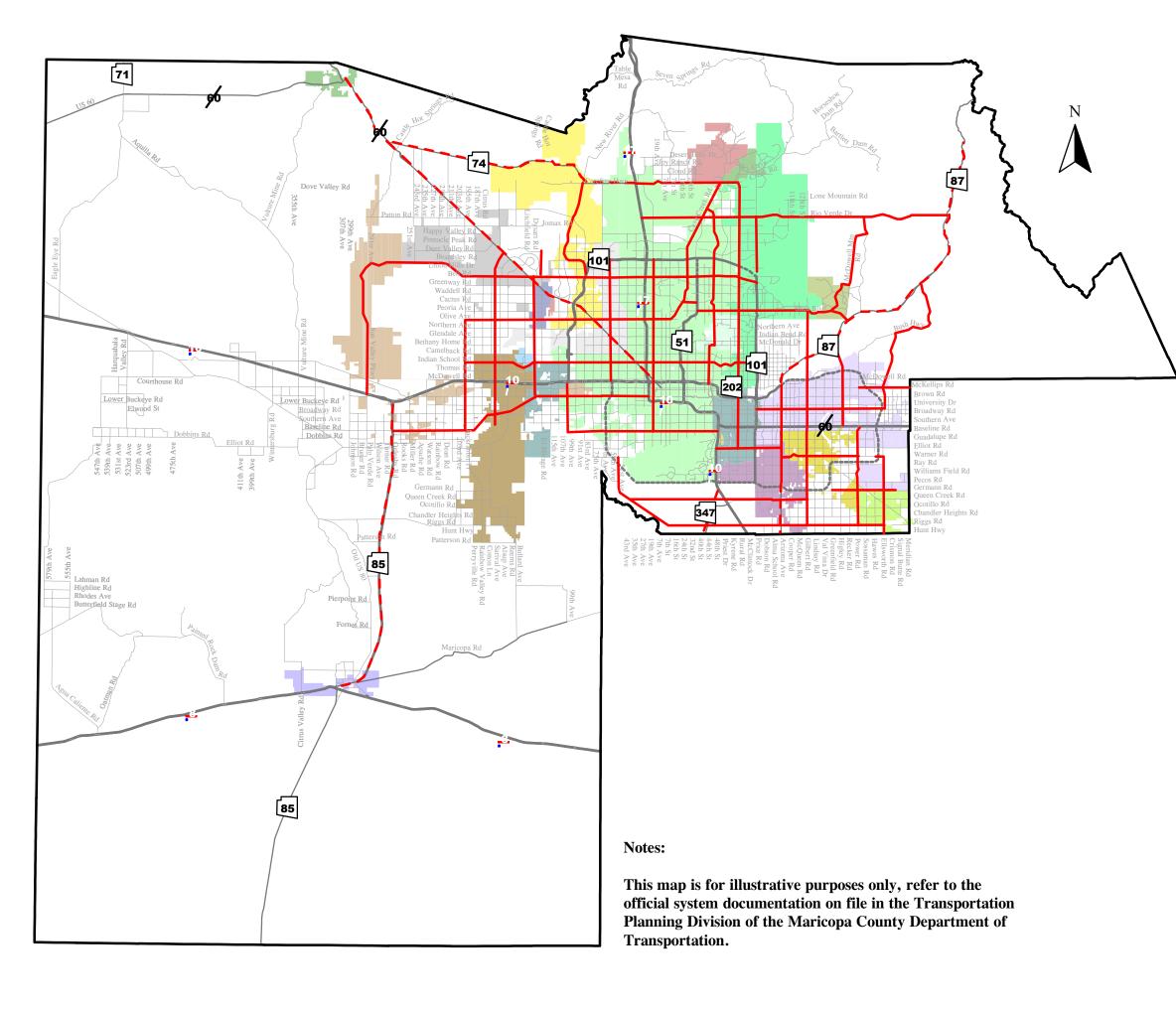
SCHOOL SAFETY OVERLAY

To identify sites where special design or operational criteria will be implemented to provide for safety

å School

County Boundary

- * On-street parking, including angle parking on the shoulder, shall be eliminated
- * A driveway for the loading and unloading of children by both buses and private vehicles shall be provided.
- * All access shall be designed to eliminate backing into the roadway.
- * Pedestrian crosswalks shall be located at intersections if possible. Flashers shall be included at unsignalized locations.
- * Bicycle path and/or lanes shall be incorporated to provide access to all residential developments within the school service area as practicable.



ROADS OF REGIONAL SIGNIFICANCE

To improve mobility in the region by providing a system of streets and roads



Existing Urban RRS

Existing Gateway RRS (Approved 4/28/99)

County Boundary

- * The right-of-way width shall be 42.4 meters (140 feet).
- * See the MSRP Policy Document for other design parameters.